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Response to the Examination Report of Mr P. Coughlan dated 9/22/2005

I. To meet the objections in the Examination Report of Sept. 22, 2005, I have made amendments to all claims and to paragraph „1. Introduction“ of the description. In the amended claims, the application of the invention is restricted to a robot or agent system. Claim 6 is canceled because the content of it is included in claim 4 (currently amended). Claim 7 is canceled because the content of it is included in claim 5 (currently amended). Paragraph „1. Introduction“ is replaced by the paragraphs and sections as required by the USPTO.

The amendments include no new matter.

II. Although the claims were too general and not clear enough, I cannot accept the rejection of the claims 1, 2, 8 and 11 under 35 U.S.C. 103(a) for the following reasons:

1. Response to objections to claim 1.

By a stimulus Lee understands attributes associated with an object, agent or event, where an attribute is the intensity or degree of emotions: joy, despair, love, hate, fear, importance of goals, success and failure of goals etc. Lee does not consider stimulus patterns and does not determine intensity of stimulus of an object by stimulus patterns. Lee measures the importance of an object or event in a quite different way than I do in claim 1, where a stimulus pattern concerns one need; in the amended claim 1 this difference is pointed out.

Also, the amended claim 1 and 3 show, that the intensities of positive and negative emotions are calculated in a quite different way than in the paper of Lee.

2. Response to objections to claim 2.

In my cited paper (February 1998) I do not consider the emotions contentment, joy, dissatisfaction, anger, grief; the symbols SM1 and SM2, in section „2.5 Attraction and Motivation“, denote situations and SM1 should not be interpreted as a person/agent, and SM2 is neither a need nor a desire. I do not see how from attributes of objects, agents and events considered by Lee could be calculated the intensity of said emotions with regard to a need. The amended claim 2 shows that the calculation of said intensity is new and not obvious to an expert.

I do not teach the intensities of said emotions change in my said paper (1998), neither in section 2.5 nor in other section; said section 2.5 is only an attempt to establish a motivation of an agent to execute a sub-activity.

Further, the Examination Report states that it would have been obvious to modify the representation of stimulus patterns in the description of objects and situations of Lee, with the stimulus patterns associated with a goal situation in my invention. As I said in §1, Lee does not teach stimulus pattern with respect to a need. Lee teaches only attributes such as joy, despair, love, hate, fear, importance of goals, likelihood of goal success and failure, success and failure of goals. Most of these attributes are constant at time and therefore such stimulus do not judge intelligently the current importance of said object, situation or goal for the agent.

Further, the Examination Report say that Lee teaches representation of intensity of contentment, joy, dissatisfaction and anger when realizing achieving a goal - but Lee does not consider the intensity of these emotions with regard to a need of a robot/agent, as I do in my invention.

### 3. Response to objections to claim 8

El-Nasr understand stimulus as attributes such as: likelihood of the event or goal, desirability of the event with regard to a goal, blocked state, unblocked state. In §4, C1, 22-25, El-Nasr states that fear of a robot is caused by four external states: sound, brightness, anxiety and being alone. Thus, fear, according to El-Nasr, is not determined by stimulus patterns with regard to a need. The method of El-Nasr for establishing fear in a robot is naive and cannot be modified to get the method in my invention. The method in my invention is useful to measure the un-ability of the robot/agent to cope with a situation or to achieve a goal when executing an activity. The method of El-Nasr for establishing fear in a robot is a primitive simulation of a fear behavior of a child (p. 138, §3.3, C2,4-9) and is useless for a real robot/agent.

### 4. Response to objections to claim 11.

The last two lines on p. 8 of the Examination Report are not clear (it seems to be a misunderstanding) because (i) Lee does not teach the format for the equation of shame, (ii) section Attraction and Motivation does not occur in Lee but in Schurmann (1998), and (iii) in Schurmann (1998) is nothing said about the emotions considered in claim 11.

Further, the Examiner says that Joao teaches the method for representing the intensity of shame. Actually, Joao does not teach the representation of shame by intensities of the emotions dissatisfaction, annoyance, anger, grief, pain and suffering. The intensity of the emotion shame in Joao is not calculated, it is only one of many input data given in questionnaires concerning the personality of a real person. These questionnaire data are analysed by computer programs to get psychological/psychiatric personality and diagnostic reports (and other reports too) concerning the said person.

Further, in the Report is said that it would have been obvious to modify the representation of stimulus patterns of Lee to get the intensity of shame of claim 11. As I said, Lee does not use stimulus patterns and I do not see how by means of a stimuli or emotion attributes of Lee could be determined the intensity of shame, which is an emotion with respect to the need for recognition, acknowledgement and self-esteem.

  
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Encl.: 1. Amendments to Section „1. Introduction“ of the description.  
2. Amendments to the claims.